W1TKZ

JUNE 1979

The Spark Gap

BOOK V VOL IV

WA1AHC

Official Journal of the Wellesley Amateur Radio Society

It Seems to Me...

It's hard to believe, but here it is May already, and with the coming of the warm weather, most of the club year is now behind us.

April was the busiest month of the club calendar with the auction and the BAA Marathon coming just over a week apart at the beginning of the month. Once again, the auction was a big success, with some of the best quality equipment to be seen at any auction. Although not quite as big in terms of number of items sold as last year, it was still a success and will easily keep the club in the black for the coming year.

Patriot's Day on April 16th marked the official celebration, and as every year, the running of the world famous Boston Marathon. For the second year the Wellesley Amateur Radio Society provided communications support for the Boston Athletic Association officials, with stations set up along the route and at the start and finish. Once again, the race was a great success, and the officials were very appreciative of our help. A complete report on the marathon and our participation will be in the June issue of the "Spark Gap".

With the coming of the warm weather thoughts turn to Field Day, which is now less than two months away. As you undoubtedly know by now, the club will be journeying to Martha's Vineyard this year, where a hilltop awaits the radiation of W1TKZ for one hectic weekend. Other than Field Day, the ham's traditional warm weather event, the mind tends to turn away from ham radio around this time of year. Before turning to your summertime activities, I would like to direct your attention to the several proposed changes to the Amateur Radio Service, which are detailed on pages 2 and 6 following. I would urge you to comment to the FCC about these proposals as they are of unusual importance to the Amateur Radio Service as compared to most of the changes that come up. I can't tell you that it isn't much trouble to take the time to write the FCC, because I have sent in a number of detailed comments myself and so I know that it can be a lot of work to carefully and clearly prepare and present your thoughts on a subject. Your personal reward will not be great either; in fact the only notice that you are likely to get as a result of your efforts is some copies of other comments received by the FCC. However let me assure you that the effort is definitely worth it, if you care about the future of Amateur Radio. The FCC does take note of the comments received, and unless they get yours, they are going to listen to others whose opinions may be completely different from yours and from the best interests of Amateur Radio.

With that I'll get off my soapbox. I do hope you will consider my above comments seriously if you really do care about the world of Amateur Radio as much as I do.

MEETINGS THIS MONTH:

May 3, 1979 at 7:30 pm

May 17, 1979 at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

ANNOUNCEMENT

Recent 27 MHz expansion proposals could actually threaten the Amateur 10 meter band as the Washington scene appears to be shaping up. Both the CB Magazine porposal for adding SSB CB channels (RM-3299) and the Washington State CB Radio Association's Petition for a new hobby class "Amateur" allocation below 28 MHz (RM-3317) are reported receiving very heavy positive response, almost entirely from CB'ers, CB organizations and (assumedly) those already active in the 27.405 to 28.000 MHz spectrum. The comments, almost without exception, endorse the merits of more flexible, higher power, longer range communications, and often cite a basic, no-code Amateur license as part of the package.

The number of respondents and their enthusiasm seem to have caught the Commission's attention, from staff level up. Japan's experience, where very elementary Amateur licenses have spawned an Amateur population about twice that of the United States, and the experiences of some other nations such as Russia which also have entry level licenses are also being looked at.

The real threat to the present integrity of 10 meters thus lies in the Washington state petition. Under present international allocations the frequencies they want for a new "Amateur" service are not Amateur, and it is inconceivable that the FCC would opt to make such an allocation on the eve of a World Administrative Radio Conference. The problem with the Washington state proposal is that it could without too much stretching, lead into a domestic restructuring of 10 meter Amateur use with a rapid influx of new "Amateurs" from 27 MHz SSB ranks.

Nothing of this nature is likely to happen in the immediate future due to the imminence of WARC and the current state of the FCC--still in the throes of reorganization. Neither is any action expected soon on the ARRL's petition for 220 MHz Novice phone privileges, for the same reasons. Comments on that petition came almost entirely from Amateurs and, as was the case with the "Communicator Class" in Docket 20282, were pretty evenly divided between pro and con.

What does seem likely is a new and very hard look at the domestic Amateur service after WARC from a new "consumer oriented" FCC with little knowledge of or concern for traditional Amateur radio values. Some new form of "Restructuring" would be the logical outcome of such an examination--the Commissioners said as much when they terminated Docket 20282 some weeks ago.

Comments on these two potentially critical 27 MHz Dockets can go to the FCC up through May 15. Copies of comments on RM-3299 must go to CB Magazine, 531 N. Ann Arbor, Oklahoma City, Okla. 73127. Those for RM-3317 go to the Washington State CB Radio Association, Box 293, Mounlake Terrace, Washington 98043.

hr Report, April 6, 1979 □

NEW CLUB MEMBERS

This month we have a large group of new members to welcome to the Wellesley Amateur Radio Society. They are: Phillip Broeg, W1HBB; David Kent, N2AWG; Charles Reynolds, KA1AXW; Karen Rudnick; Skid Schermerhorn, W1TTY; and Sol Smith, W1HNN. Glad to have you all aboard, and hope to see you active in the many club activities! □

Hearabouts....

Our club's recording secretary, George Young, WA1YAU, has been doing some research through the files of the Wellesley Townsman, and has come up with the following list of past presidents of the WARS. George would appreciate it if anyone could further his research with the names of earlier presidents of the club. Can anyone help?

Former WARS Presidents:

Anson Moran	1961-63
Richard Steegstra	1963-65
Bradley Rohrer	1965-66
Lud Fasolino	1966-67
Marshall H. Cannell	1967-68
Jack Rathnell	1968-70
William H. Emerson	1970-74
Donald Chesley	1974-

□

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

EDITOR-IN-CHIEF: NELS J. ANDERSON, K1UR
32 WESTGATE ROAD, APT. 6
CHESTNUT HILL, MASS. 02167

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $5. THE CLUB YEAR RUNS FROM SEPTEMBER 1 - JUNE 30. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

Minutes

Meeting of April 5, 1979:

The president announced that the new education package has been completed by education chairman Bill Hanlon, N1ADY.

The 63/03 repeater has been purchased by the club and a repeater committee has been established, with Dave Curry, K1TK, Bill Downing, WA1PQY, Scott Nacey, WA1YOJ, and Dick Peret, WA1ZLQ, as committee members.

The president went over checkpoints for the marathon, handing out brochures and maps.

Dick Magnanti, WB1BUQ, announced that the total vote for the Constitution was 73 in favor, so the new Constitution is in effect.

Kevin Kelly, WA1YHV, handed out assignments for the auction.

The president plans to have a discussion about Field Day at the next meeting.

The meeting closed at 8:55 pm. □

Executive Minutes

Meeting of March 31, 1979:

The meeting opened at 7:55 pm.

First topic was Field Day. A strenuous debate ensued over the Field Day program and rates. Members decided that the club will not foot the bill, that those attending will pay their own way. Also, they will pay extra if they bring family members.

The auction was next. Kevin Kelly took the floor, then went down the list of auction committees, handing out assignments. Members debated what would be the door prize. The president then gave C.J. McDonald instructions for buying food and supplies.

The 63/03 repeater committee was set up with David Curry, K1TK, Bill Downing, WA1PQY, Dick Peret, WA1ZLQ, and Scott Nacey, WA1YOJ, on it.

Education chairman Bill Hanlon, N1ADY, handed out the education programs, which the committee members all agreed were excellent. A copy of this program was given to the recording secretary for the club archives.

On the BAA Marathon, the president handed out the assignments.

The meeting closed at 11:05 pm. □

education corner

Bill Hanlon, N1ADY

"How's Your Enthusiasm?

If you have always hesitated to teach because you worry about what is involved in being on the other side of the podium, rest your fears. Teaching is really another form of learning, and actually even easier. After all, the teacher gets to have the book open all the time! Seriously, there is nothing terribly mysterious about teaching, whether it be about Amateur Radio or any other subject. Great amount of expertise and experience are definitely not required. Far more important is the enthusiasm for the subject." (ARRL Instructor Guide).

So---how's your enthusiasm? If you would be willing to teach one of our future license classes, please contact me at club meetings or call 653-6462 weekdays. □

TRAFFIC

By Jim Hatherley, WA1TBY

PROCEDURE ON CHECKING INTO TRAFFIC NETS

Since we have so many new Novices who have had no experience working on a traffic net, I thought it would be nice to more or less brush over some of the things that make a net work efficiently and effectively. "Q" signals are used to cut down a lot of needless transmissions on frequency and we will go into these as well as other parts of the net.

First of all, a net is controlled by the NET CONTROL STATION (NCS) who, when opening up the net will send something like this, CQ WARS DE W1TKZ QND (I am the net control station), QNZ (please zero beat my frequency), QNI (please check in), K. While he is sending this you should be zero beating your frequency on the NCS. After he sends K, you send some letter such as a "C". NCS will send back a "C" which is your cue to send DE WB1XYZ QNI QRU K (or QTC in place of QRU saying you do have traffic to send). NCS will then say R AS (wait). He will then listen for other stations wishing to QNI until he has logged all the stations reporting into the net. Once he has completed this he will then proceed to work the net. He will send the last three letters of your call and you will respond with a dit or K and he will instruct you to QSY (shift frequency) up or down, so many kHz. For instance, he will say XYZ/TBY up 5, which means that the two stations with those last letters will change frequency up five kiloHertz and establish contact. Normally the receiving station will call the other station when he QSY's, so you both won't be calling each other at the same time. Once on the new frequency, you can send your traffic or just have a QSO and when finished you check back into the original net frequency just by sending your last three letters of your call so the NCS will know you are back. He will acknowledge your return and probably tell you to wait (AS). If you wish to leave the net, just send your call letters (last 3) and say QNX IMI and if you are not needed on the net, the NCS station will send QNX (you are excused from the net). When the net is to be terminated by the NCS he will send CQ WARS DE W1TKZ QRU QNF. (I have nothing more for you, the net is now free of control). So, you can see that the Q signals are important in the operation of a traffic net. At the club we have some pink printouts which contain all the Q signals used in both traffic handling and just QSOing. Pick one up at the club. You can also find them in the Radio Operators Manual by the ARRL, which goes into the different phases of all radio operating as well as nets.

Now, how do we compose messages to send out? O.K. We'll go into that now. First of all you want to keep your messages serialized so we put a number on each message we originate at our station. It starts with NR 1 for the first one and NR 2 for the second one, and so on.

The next thing we do is establish the priority of the message (importance). Most traffic is of the normal type so we use the word "routine" which we show on the preamble of our message as just an "R". Next we put the originating station followed by the number of words in the text of the message, the town of origination and finally the time and date the message was originated. So now the preamble would look something like this:
NR1 R W1TKZ 24 WELLESLEY MA 2054Z 10/5

From here we then send the address of where it is going to: Mr. Mrs. John Murhpy AA (new line), 456 Main Street AA Los Angeles CA 90315 AA TEL 213 765 5549 BT.

After the BT we begin the rest of the message....BT Katherine Redman is leaving for Florida Sunday October two X will visit you on the way Sunday between ten and eleven am X love BT Peter Hickey AR.

Now, if you examine the text above between BT's you can count 24 words to agree with that number given in the preamble. You will also notice that an "X" is counted as a word and if you ask a question in the text, you then use the word QUERY for a question mark but it is counted as a word just like the "X" denotes a period. After the second BT is the signature of who is sending the message followed by the prosign AR indicating the end of the entire message.

Now let's review a complete message as we have discussed above:

NR1 R W1TKZ 24 WELLESLEY MA 2054Z 10/5
MR MRS JOHN MURPHY
456 MAIN ST
LOS ANGELES CA 90315
TEL 213 765 5549 BT KATHERINE REDMAN IS LEAVING FOR FLORIDA SUNDAY OCTOBER TWO X WILL VISIT YOU ON THE WAY SUNDAY BETWEEN TEN AND ELEVEN AM X LOVE BT PETER HICKEY AR K (over to the receiving station).

This is how it would look on completion.

Now, supposing you, the receiving station miss a few words of the text of the message, how do you ask for that missing information? We have some words which ask for a particular section or word of the message which are: WA (word after) and send the previous word you did get, like, WA John, which you would know was MURHPY, so you send WA JOHN MURPHY K. Other fills are WB (word before), AB (all before), AA (all after), BN (between, send the first and last word you copied correctly when asking for BN). Okay?

Once you have the entire message correct you send QSL (I acknowledge receipt of your message) and you then both return to the net control. It is really simple once you get the hand of it but the Novice Net is the place where practice will breed familiarity with this. □

profiles

By George Young, WA1YAU

This month, Profiles looks at Matt Vartanian, a ham who possesses a very unusual callsign, namely AC1D.

A lifelong resident of Wayland, Matt was born in Boston on November 30, 1962. He has always held an interest in the ham radio hobby, but what really sparked his interest was the Natick Mall Message Fair of 1974. This was his first face to fact encounter with a radio station and how it operates. He asked questions about the station setup and also if the club held classes for obtaining a license. During the following year of 1975, Matt took the club's Novice theory course and obtained his Novice ticket, with the call of WN1WDF, later changed to WA1WDF.

Between school and ham radio, it took him until the summer of 1977 to obtain his General license. The following January, he passed the Advanced test, and became an Extra class ham in March. He had wanted to obtain a 1x2 callsign, but since this was no longer possible, he was assigned his present call last July. Like anything that is new and untried, Matt wasn't sure what to make of such an unusual callsign. He had nothing to worry about, for he soon discovered an unheard-of popularity (his call had passed the ACID test?).

What happened was that Matt was constantly being mistaken for rare DX. It was very easy for him to work foreign stations, since the hams overseas did not know what to make of AC1D, asking him what country he was from. Recently, he worked an Iceland station who, besides inquiring about his QTH, wanted a QSL from Matt for the Worked-All-Prefixes award. He has the same problems with American hams. Besides guessing his country, almost every conversation deals with his callsign. It will take quite a long while before we get used to 2x1 callsigns.

Outside of explaining his new call, Matt's other hobby is cross country skiing, of which he does mostly in this area. He spends most of his air time on ten and two meters, using a Tempo One with a Mosley vertical antenna. At the moment, he is planning to get on eighty meters. In the near future Matt intends on going to college upon graduation from Wayland High School in 1981. □

ELECTRONICS EXCHANGE

Larsen 2 meter 5/8 wave mobile magnetic mount antenna. New, $25. TR-44 rotator and control box. Factory rebuilt, $35. Call Dick, WA1HRV, at 655-2366.

Swan Twins, 600T transmitter, and 600R custom receiver, with Swan speaker and phone patch. $700. Swan 1200X linear, mint condition, $150. Call Dick Magnanti, WB1BUQ, at 235-6371. □

"timeout!"

By Mike Adlerstein, K1FB

When I looked through the mail that evening, there it was: my March issue of QST. What a cover it had; a picture of Joe Hamm sitting in front of a TVI spoiled television set with pen in hand. There he was writing a letter to the FCC. A voice in the wilderness. A plea for a rational approach to the radio frequency interference problem which has, at one time or another, plagued most hams and CB'ers.

Try to explain to an irate neighbor that it is the deficient design of his stereo that results in your voice pouring through. They won't believe it! You are at fault and you must go QRT!

Sure, it's possible that you have an unfortunate harmonic right on an i.f. frequency but this is unlikely with today's modern Amateur equipment and the rigorous standards which the FCC applies to its performances. Besides, most electronic organs and record players don't have an i.f. and should not receive any airwave signals.

Yes, it seems straight forward and clearcut to those with a technical background but it is tough to explain to the layman.

Indeed, if the purpose of the FCC is to promote effective sharing of the r.f. spectrum, there is no logical difference between requiring performance standards on transmitters and requiring them on other electronic devices such as TV's, hi-fi's, etc. The consumer deserves protection from poor design. It should be built into the equipment he buys. It is also fair that he pay for it. If his equipment is susceptable to R.F.I. he should, by law, at least be informed of this fact by the FCC.

A comprehensive approach to the RFI problem has been languishing in Congress since 1972. Finally, the FCC is coming to grips with the problem through their request for comment on General Docket Number 78-369.

It is imperitive that those of us familiar with the problem respond. Take the time to send an original plus five copies of your remarks to: Secretary, Federal Communications Commission, Washington, D.C. 20554. Refer to the Docket number. The deadline is May 1st, 1979. For further information, see March 1979 QST, Page 48. □

OFFICIAL BULLETIN

Nr 16, dated March 22, 1979:

FCC has extended the grace period for renewals of Amateur Radio operator licenses to five years. Any person who let his Amateur license expire may regain his operator privileges without re-examination if it has been five years or less since the date of expiration. Details will appear in May 1979 QST under the Happenings column. □

Auctions/Flea Markets

May 12: Sixth annual "Hoss-Traders Tailgate Swapfest" - Deerfield, N.H. Rain or shine (covered buildings in case of rain), food available, one dollar admission, no commission or percentage. Excess revenues benefit "Boston Burns unit of Shriner's Hospital for cripples kids". Talk-in on 40/10 & 52 direct. Questions or map, SASE to Joe Demase, K1RQG, Star Rt. Box 56, Bucksport, Me. 04416 or Norm Blake, WA1IVB, P.O. Box 32, Cornish Me. 04020 or check in Hoss-Traders net on Sundays, 4-6 pm on 3.940 MHz.

May 14: Newport County Radio Club auction, 7 pm at Seaman's Institute, 18 Market Street, off of "America's Cup Avenue". Next to the Treadway Inn, Newport, R.I. More info via SASE to the above address.

May 19: RI - FM Repeater (16/76). Flea market at 10 am, auction at 1 pm. Steer's Beach club on Waterman Lake, Greenville, R.I. I95 to I295 to Rt 44 west about 3.5 miles. Talk-in on 16/76 and 52 direct. Rain or shine, food.

May 20: 5th annual Eastern Conn. Amateur Radio Assn. Giant flea market, 9 am to 6 pm. Advance tables $4, at door $5, admission $1. Rain or shine, talk-in on 52 direct. Many raffles. Point Breeze Restaurant Hall, Webster, Mass. Food/drink available. Info: Dick at 617-943-4420 after 8 pm. □

OLDE TIME RADIO

By Nels Anderson, K1UR

art Two)

Oliver Lodge, a physicist at the University of Liverpool, did further work with the coherer in the 1880's and 1890's. He also experimented with transmitting apparatus, and so developed a system that was useable for wireless telegraphy. Lodge did experiments with spark gap circuits which also contained Leyden jars and loops of wire. As Hertz had done, Lodge adjusted the elements of his circuit and found the strength of the spark varied. He eventually found that the spark was greatest when the wires he used as an antenna were a half wavelength long (a half-wave dipole!). The Leyden jar and loops of wire are the forerunners of modern tuning circuits using capacitors and inductors, so Lodge's work in this area was extremely important. Lodge also confirmed Hertz's experiments showing that elecromagnetic waves travel at the speed of light, and did this in a way that was simpler to understand, and easier to demonstrate than was Hertz's method.

At first, Lodge's transmitter was a much inferior radiator than Hertz's, because he had not thought to open up the Leyden jar into an antenna as Hertz had done. When he saw Hertz's work, he realized that his transmitter was built as if specially designed not to radiate, whereas Hertz's was designed to radiate as much as possible. He changed his apparatus, and had a much better radiator to work with.

It was in the receiver, however, that Lodge made the greatest advances. Hertz's loops with spark gaps were adequate for laboratory experiments, but now that Lodge had the coherer available, a better receiver could be built. The receiver he designed was a very practical one for receiving Morse signals. He used an antenna with spark gap connected across the coherer to sense the waves. The coherer itself was in series with a battery and a relay so that when a wave was detected, current would flow, closing the relay and activating another circuit containing an inker which would record the signals on a moving strip of paper. The second circuit would also activate a trembler which would shake the coherer and make it ready for detecting the next wave. This early receiving circuit did not yet contain any method for tuning, but Lodge later developed this. Lodge tuned the antenna circuit by adjusting the length of the antenna and by varying the size of coils with which the antenna was connected to the equipment, and so making the antenna resonant.

Oliver Lodge had developed a fairly useable system for wireless telegraphy but being a scientist, he did not at the time consider developing it commercially. Instead, he continued teaching and his other duties, and experimented with wireless only at intervals, while others developed it practically.

Lodge made no attempts to transmit messages nor see how far his apparatus could go. However, in 1894 he lectured on his work, and this lecture proved inspirational to others who were prepared to go on working toward a practical system of wireless communications. As additional inspiration, in 1892 Sir William Crookes had published an article in the "Fortnightly Review" in which he envisioned all the requirements for a radio communications system.

A number of others became involved in the field of radio in the early 1890's, such as Slaby in Germany, Popov in Russia, and Righi in Italy, who would later play a part in helping Marconi get started. Alexander Muirhead even convinced Lodge to patent his devices, and formed a syndicate with him to exploit resonant tuning and other inventions of Lodge.

A.S. Popov, a physics instructor at the Russian Navy's torpedo school at Kronstadt has been strongly advocated as the inventor of radio by the Soviet Union. He did work on receivers but used them mostly for detecting atmospheric disturbances. In 1896 he wrote that he hoped his device could someday be used to receive intelligence, but a stronger transmitter was needed. The real problem, though, was that Popov's coherer was not sensitive enough.

By 1892 all the basic elements needed to develop a system of wireless telegraphy were available. The spark

gap transmitter was ready to provide radiation. Lodge's coherer receiver was already adapted to printed Morse signals, although it was not yet used for this purpose. William Crookes was the only one to have yet seen the possibilities, but he did nothing to develop them. Both Oliver Lodge and William Preece, the engineer-in-chief of the British Post Office, were in a position to become dominant in the wireless communications industry. Preece had done experiments in inductive wireless, and had succeeded in telegraphing four and a half miles. He had the interest and also the position to bring together a syndicate under government authority. Lodge had done much experimentation and had a system that was almost commercially useable, but since he considered himself a "pure" scientist, he did not act. Preece likewise did nothing, as he had earlier had a run-in with Lodge on another matter and was reluctant to invade Lodge's domain.

This left the field open for Marconi. Guglielmo Marconi was born on 25 April 1874 to Guiseppe Marconi, a fairly wealthy Italian landowner, and Anne Jameson Marconi, the daughter of a wealthy Irish whiskey distiller. He did not receive much formal education, but since his family was well off, he did not have to work, and so spent his early years learning on his own. In 1894 Marconi first learned of Hertz's experiments with electromagnetic waves, and this got him started on his life's work.

Professor Righi, who had been doing some work with electromagnetic waves, taught at the University of Bologna, which is near Marconi's home. Righi was, in fact, a friend of the Marconi family. So, although Marconi had too little formal education to enter the university as a regular student, he was allowed to audit Righi's lectures, and use Righi's lab for experiments.

Marconi worked on his system of wireless telegraphy, and made some improvements over Lodge's apparatus. Eventually he was able to signal over a distance of one and a half miles, the length of the family estate. This success was enough to convince Guiseppe Marconi that it was worth investing some money in his son's work, so in 1896 a trip was arranged to England for Marconi and his mother.

In England Marconi was met by Henry Jameson Davis, one of the members of his mother's large family, and also a lawyer. The Jameson and Davis families were able to provide Marconi with the only things he still needed, advice and connections. Henry Jameson Davis got Marconi a patent lawyer, and arranged for an interview with William Preece at the Post Office Department.

Preece was quite enthusiastic about Marconi's system. He saw in it a way to get the Post Office involved in wireless and still avoid Lodge. Marconi was allowed to use the laboratories at the Post Office, and to gather assistants from the Post Office staff. He held his first demonstration in London from the Post Office building to a point over half a mile away.

Preece introduced Marconi to various scientific groups in England. He was first introduced at the Liverpool meeting of the British Association. They were quite enthusiastic about his results, describing them as "remarkable". As the distance of his transmissions increased, Marconi's acclaim also increased.

Marconi continued to improve on his apparatus while in London. The workmanship of each part of the apparatus improved so that the distance over which signalling could take place gradually improved to eight miles. Preece continued to offer aid to Marconi. Marconi offered his device to the government first, but Preece was overcautious and too slow in acting, so a private syndicate was formed in July 1897 by Henry Jameson Davis. Here the Jameson and Davis families came to Marconi's aid once again, providing 40% of the 100,000 pounds capital of the company. Thus the group that had guided Marconi since his arrival was formalized into a syndicate. During this year Marconi also received his patent, and so he was on his way to commercializing wireless telegraphy. □

(Concluded next month)

hr REPORT

Effects of CB antenna radiation on bodies of nearby people is being investigated by the Department of Health, Education and Welfare. The first study,

published in a 24-page booklet titled "Measurement of Electromagnetic Fields in Close Proximity of CB Antennas," discussed bumper, trunk lid and roof-top-mounted mobile antennas as well as those on hand-held units. Near field radiation distribution of each type is presented graphically, in an attempt to determine what hazard, if any, radiation presents.

The study concludes: "The health implications (of CB antenna radiation) are not clear at this time. The Bureau of Radiological Health is continuing to investigate this matter." HEW is obviously quite concerned with the effects of RF on the population, and with Amateurs running 200 times the power of CB'ers on frequencies from 1.8 MHz through millimeter wavelengths our operations are sure to come under careful scrutiny as well--if they have not already.

hr Report, March 30, 1979

- - - - - - - - - - - - - - - - - -

Docket 20282 ("Restructuring") was terminated by the FCC in mid-March, but the Commissioners left the door open for further action on the unresolved portions of the Docket. Noting that previous Report and Orders on 20282 had tightened up licensing procedures but expanded Novice and Technician privileges, the Commission reaffirmed its support for some form of no-code entry level license despite its rejection by the Amateur community when proposed four years ago.

hr Report, March 23, 1979

- - - - - - - - - - - - - - - - - -

Cigarette lighter plugs can prove disastrous in some new cars, VE2BMQ warns in the VE2RM Bulletin. Some new autos with insulated dashes are wired in reverse, so check before plugging in.

hr Report, March 16, 1979

- - - - - - - - - - - - - - - - - -

Two bills to amend the Communications Act of 1934 rather than replace it have just been introduced into the U.S. Senate. The majority bill, S-611, is sponsored by Senate Communications Subcommittee Chairman Senator Hollings and Senators Cannon and Stevens. The other, S-622, was introduced by Senator Goldwater with Senators Schmidt and Pressler as co-sponsors. Both were offered in response to the House proposal to rewrite the Communications Act, but both propose amending the existing act rather than starting over as the House bill had. Neither of the two bills addresses the growing RFI issue, and Amateur Radio rates only passing mention. Neither bill goes into much detail, with the understanding that they would be considerably expanded during the course of extensive public hearings.

hr Report, March 23, 1979□

WARSWAS Results

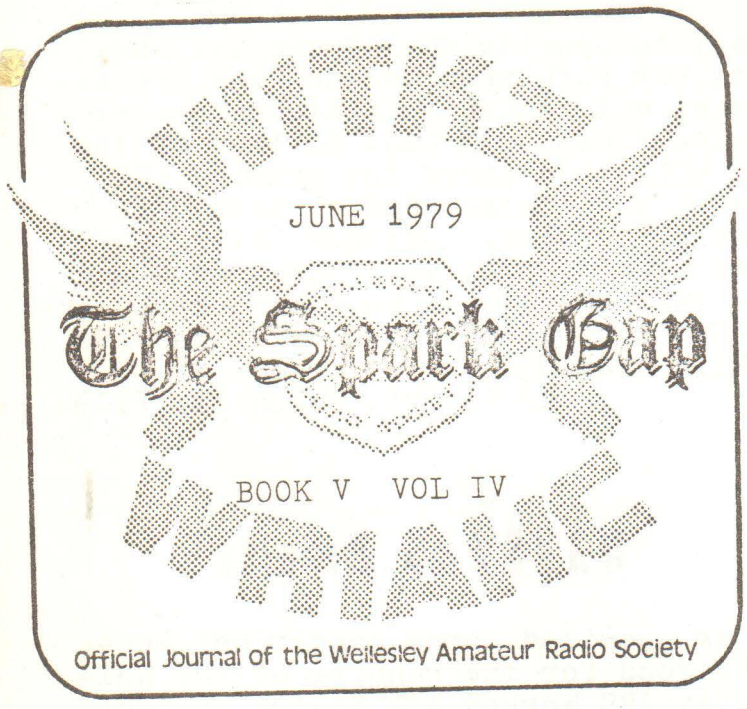
As promised, band conditions were very good for the running of the Wellesley ARS Worked All States contest. Unfortunately, only a small number (less than 1% of the club membership) decided to submit an entry. Those who turned in entries showed contacts with all fifty states, although no one entrant managed to work fifty states. The results indicate that there is not too much interest in this type of activity in the club. If you are one of the "silent majority" and would still like to see this type of event run again, perhaps with different rules, speak up to one of the club officers!

Results of the entries are show below, by entrants name, callsign, and number of states. Entries followed by an asterix (*) are non-home station results:

George Young	WA1YAU	49
Scott Nacey	WA1YOJ	43
Bill Hanlon	N1ADY	36
David Curry	K1TK (W1YK)	20*
Dick Magnanti	WB1BUQ	17
Nels Anderson	K1UR (W1DC)	16*
Dick Paret	WA1ZLQ	1
Dick Paret	WA1ZLQ(W1TKZ)	1* □

- - - - - - - - - - - - - - - - - -

Congratulations to Jim Hatherley, WA1TBY, on being appointed the Eastern Massachusetts Section Traffic Manager by SCM K1PAD. He took over this demanding job about a month ago, which gives him responsibility for overseeing the message handling system in all of Eastern Massachusetts. Good luck with the new appointment, Jim! □


WITK
JUNE 1979
The Spark Gap
BOOK V VOL IV
WA1AHC
Official Journal of the Wellesley Amateur Radio Society